CHAPTER III

RESEARCH METHOD

A. The Research Design

The type of this research is experimental research. The experimental research is the only type of the research that can test hypotheses to establish cause-and-effect relationship[1]. This research is categorized as quasi-experimental research. Quasi-experiment is a research design having some but not all of the characteristics of a true experiment. The element, most frequently missing is random assignment of subjects to the control and experimental conditions.[2]

In this research, the writer used two groups as sample, namely: experimental group and control group. For experimental group, the students were treated with particular teaching on what problems of research the writer had. Meanwhile, control group was only given a pre-test and post-test without particular treatment as given to the experiment group. Both experimental and control groups were treated with the same test.

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[1] L.R. Gay and Peter Airaisian, *Educational Research Competencies for Analysis and Application*. Six Ed. (New Jersey: Prentice-Hall, Inc., 2000), pp.36.

[2]Gay, L.R and Peter Airasian. *Educational Research Competencies for Analysis andApplication .6th Ed.* (New Jersey: Von Hoffmann Press, 2000) pp.389.

Table III.1
ResearchType

Group	Pre-test	Trearment	Post-test
Experimental	**TO**	**X**	**T1**
Control Group	**TO**	**-**	**T2**

B. The Time and Location of the Research

This research was conducted to the second year students of SMAN 1 Perhentian Raja Kampar. The time of this research was from April, 24th to May, 26th 2014.

C. The Subject and Object of the Research

The subject of this research was the students of the second year at SMAN 1 Perhentian Raja Kampar, and the object of this research was the Effect of Clustering Technique.

D. The Population and Sample of the Research

The population of this research consisted of 270 students. It was divided into nine classes namely X.A=30, X.B=30, X.C=30, XI.A=30, XI.B=30, XI.C=30, XII.A=30, XII.B=30 and XII.C=30. In this research, the writer used quasi-experimental research; the writer took two classes only. They were XI A class that consisted of 40 students as control group, and XI B class that consisted of 40 students as experimental group. So, the total of sample was 80 students.

In determining sample of this research, the researcher used cluster random sampling because the population was large. To decide which one the population that

would be taken as sample, the sample was taken based on the population that was specified. The sampl of the research was 40 students taken from XI B class.

E. The Research Procedure

1. Experimental Group

a. Pre- test

The pre test was given after teaching writing descriptive text without using clustering technique. It was used to measure the students' ability in writing descriptive text before they were taught by using clustering technique.

a. Treatment

The treatment had been conducted for experimental group taught by using clustering technique. Teacher gave explanation to the students about what descriptive text is, and taught them how to write descriptive text by using clustering technique. For applying clustering technique, teacher asked students to write descriptive text by using clustering technique.

b. Post test

Posttest was given to the students after applying clustereing technique. The result of posttest was compared with the pretest to get the influence of this method and to know students' ability in writing descriptive text after being taught by using clustering technique.

2. Control Group

a. Pre-test

The control group was given pre-test to know writing descriptive text. The test was the same as experimental group.

b. Teaching by using Conventional strategy

Students were given the explanation about descriptive text by the teacher and asked them to write descriptive text.

c. Post-test

Posttest was given to the students after being taught by using conventional strategy. It was used to know whether the students were able to write descriptive text or not.

Table III.2

Total of Population at the Second Year

Students of SMAN 1 Perhentian Raja

Kampar

No	Class	Students		
		Female	Male	Total
1	X. A	18	12	30
2	X. B	15	15	30
3	X. C	17	13	30
4	XI. A	19	11	30
5	XI. B	20	10	30
6	XI. C	14	16	30

7	XII. A	15	15	30
8	XII.B	20	10	30
9	XII.C	17	13	30
Total		**155**	**115**	**270**

Table III.3

The Sample of the Research

No	Class	Type	Students		Total
			Female	Male	
1	XI. A	Experimental Class	21	19	40
2	XI. B	Control Class	25	15	40
Total					**80**

F. The Technique of Data Collection

Test

In getting the data which were needed to support this research, the writer used the test. Test was used to collect the data about the effect of clustering technique on students'ability in writing descriptive text. In this case, there were two tests; pre-test which was given before the treatment and post-test was given after the treatment. In this test, the writer used tests in writing.

Test was conducted in order to determine the students' writing ability. Test was given in the pre-test and post-test. To know the homogeneity of two variances, the researcher took pre-test. According to Punaji, pre-test is given to analyze the homogeneity variance[3].

The researcher gave test in form of written form. Before giving pre-test and post-test, the researcher gave try out to the students, not include as sample in this research, to measure the validity and reliability of each items test.

G. The Reliability and the Validity of the Test

For testing students' writing ability the writer used test to know reliability and validity. To know the validity of the test, the writer used content validity. Content validity was used by the writer in the test, in which students were asked to write about the topics related to the materials. Gay says that reliability is the degree in which a test consistently measures whatever it is measuring.[4] As supported by brown reliability has to do with accuracy of measurement.[5]

In obtaining the reliability of test, the writer used inters rater reliability. In this research, the writer used two raters to score the students' writing ability on descriptive text. Browns says that inter rater reliability occurs when two or more scores yielded inconsistent scores of the same test, possibly for lack of attention to

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[3]Prof. Dr. H. Punaji Setyosari, M.Ed. *Metode Penelitian Pendidikan dan Pengembangan*. (Jakarta : Kencana Media, 2012), P.278

[4] L.R.Gay and Peter Airasian, *Educational Research Competencies for Analysis and Application Sixth Edition*. (New Jersey: Pearson Education, 2000),p.196.

[5] H. Douglas Brown. *Language Assessment: Principles and Classroom Practices*. (New York: Pearson Education Inc, 2003), p.19-27.

score criteria, inexperience, inattention or even preconceived biases.[6] The score of judge 1 can be correlated to judge 2. To know the reliability of the test, the writer used product moment formula through SPSS 16.0 Version.

Table. III.4

Correlation

		rater1	rater2
rater1	Pearson Correlation	1	.457*
	Sig. (2-tailed)		.011
	N	30	30
rater2	Pearson Correlation	.457*	1
	Sig. (2-tailed)	.011	
	N	30	30

**. Correlation is significant at the 0.05 level (2-tailed).*

From the output above, it can be seen that r calculation is 0.457, to correlate to r table. Firstly obtained the degree of freedom (df = n+n-2), the df was 58, because df = 58 was not found, so the writer took df = 60 to be correlated either at level of 5% and 1%. At the level 5% r table 0.250 and at level 1 % r table 0.325.

[6] Ibid, p.21.

r calculation (r_o)	r table (r_t)
0.457	0.250 (5%) 0.325 (1%)

From the table above, the writer concluded that (r_o) is higher than (r_t) either at 5% and 1%. Thus, there is a significant correlation between score of rater 1 and rater 2. In other words, the writing test is reliable, because the reliability of writing test is moderate relationship.

H. The Technique of Data Analysis

In order to find out whether there is significant effect of clustering technique toward students'ability in writing descriptive text, the data were analyzed statistically. To analyze the data, the writer used score of post-test of the experimental and control groups. These scores were analyzed by using statistical analysis. The data were analyzed by using T-test (independent sample t-test), and it was calculated by using software SPSS 16.

The t-table was employed to see whether or not there was significant difference between the mean score in both experimental and control groups.

Statistically hypothesis:

$H_0 = t_0 < t$ table

$H_a = t_0 > t$ table

Criteria of hypothesis:

1. H_0 is accepted if t_0 < t table or it can be said that there is no a significant effect of using clustering technique on studens'ability in writing descriptive text.
2. H_a is accepted if t_0> t table or there is significant effect of using clustering technique on students'ability in writing descriptive text.

The Scoring Guide of the English Composition Test

Aspect	Range	Criteria
Content	80-100	EXECELENT TO VERY GOOD: knowledgeable. Substantive through development of thesis relevant to assigned topic.
	70-79	GOOD TO AVERAGE: some knowledgeable of subject, adequate range, limited development of thesis, mostly relevent to topick but lack detail.
	60-69	FAIR TO FOOR: limited knowlagde of subject. Little substance, inadequate development of topick.
	50-59	VERY POOR: does not show the knowladge of subject. Non-substantive, not pertinenet, or not enough to evaluate.
Organization	80-100	EXECELENT TO VERY GOOD: fluent expression, ideas clearly stated/ supported, well organized, logical sequencing, cohesive.
	70-79	GOOD TO AVERAGE: somewhat copy,

		loosely organized but main ideas stand out, limited support, logical but incomplet sequencing.
	60-69	FAIR TO POOR: non-fluent, ideas confused or discoonnected, lack logical sequencing and development.
	50-59	VERY POOR: does not communicate, no organization, or not enough to evaluate.

Vocabulary	80-100	EXECELENT TO VERY GOOD: sophisticated range, effective word/ idiom choice and usage, word form mastery, appropriate register.
	70-79	GOO TO AVERAGE: adequate range, occasional errors of word/idiom form, usage but meaning not obscured.
	60-69	FAIR TO POOR: limited range, frequent errors of word/idiom form, choice usage, meaning confused or obscured.
	50-59	VERY POOR: essentially translation, little knowladge, of English vocabulary, idioms, word form or not enough to evaluate.
Language Use	80-100	EXECELENT TO VERY GOOD: effective complex constructions, few errors of agreement, tense number, word order/ function, articles, pronouns, preposition.
	70-79	VERY GOOD TO AVERAGE: effective but simple constructions, minor problems in complex constructions. Several errors of agreement, tense,number word order/functions, articles, pronouns, prepositions but meaning never obscured.
	60-69	FAIR TO POOR: major problem in simple/compex constructions. Frequent errors of negations, agreement, tense, number, word order,/functions, articles, pronouns, prepositions

		and or fragments, deletions. Meaning confused or obsecurd.
	50-59	VERY POOR: virtually not mastery of sentence construction rules. Dominated by errors. Does not communicate or not enough to evaluate.

Mechanics	80-100	EXECELENT TO VERY GOOD: demonstrates mastery of conventions. Few errors of spelling, punctuation, capitalization, paragraphing.
	70-79	VERY GOOD TO AVERAGE: occasional errors of spelling, punctuation, capitalizatio, paragraphing, but meaning not obscured.
	60-69	FAIR TO POOR: frequent errors of spelling, punctuation, capitalization, pargraphing. Poor handwriting. Meaning confused or obscured.
	50-59	VERY POOR: no mastery of conventions. Dominated by errors of spelling, punctuation, capitalization, paragraphing. Handwriting illegible. Or not enough to evaluate.